

**KANSAS CITY, MISSOURI
EMERGENCY
OPERATIONS PLAN**

Annex D: Damage Assessment

September 2014

KANSAS CITY, MISSOURI DAMAGE ASSESSMENT PLAN

Primary (lead) Departments:	Emergency Management General Services Department Neighborhood & Housing Services Parks and Recreation Department
Secondary (support) Departments:	3-1-1 Call Center City Communications Fire Department Health Department EMS Medical Director Information Technology Department Office of Management and Budget Office of Environmental Quality Planning and Development Police Department Public Works Department Water Services Department
Secondary (support) External Agencies:	American Red Cross Federal Emergency Management Agency Mutual Aid Salvation Army State Emergency Management Agency

I. PURPOSE STATEMENT

The purpose of this Annex is to provide guidance concerning the collection and reporting of timely and accurate damage assessment information. This information is critical to conducting effective disaster response and recovery operations, and applying for state and federal disaster assistance programs.

II. PLANNING ASSUMPTIONS

- A. Post-disaster damage assessment activities are considered the first stage of the recovery process, and will be implemented as soon as possible following the event. Initial damage reports may be fragmented and provide an incomplete picture of the extent and magnitude of damage.
- B. The EMD will initiate the damage assessment process, and will submit final reports to state and federal agencies on behalf of the City of Kansas City.
- C. The General Services Department (GSD) will coordinate Public Assistance damage assessment teams in the field, and will collect and analyze information for overall damage reports to be submitted to the EMD.
- D. The Neighborhoods and Housing Services Department will coordinate private sector, Land Bank property, and Homestead Authority property damage assessment teams in the field, and will collect and analyze information for overall damage reports to be submitted to the EMD.
- E. The City will conduct an internal rapid assessment using City staff, and, based on those results, may subsequently conduct a formal damage assessment in cooperation with state and federal agencies.
- F. All City departments will cooperate in the damage assessment process, and will provide sufficient staff to conduct both initial and formal damage assessments activities.
- G. The City will use disaster assessment forms consistent with those developed by the State Emergency Management Agency (SEMA) to ensure a standard reporting method is used (see Attachment D-1 State Damage Assessment Forms). This will ensure the City conducts all damage assessment activities in accordance with state and federal requirements.
- H. Water Services and Aviation Departments, due to the specialized nature of their facilities and equipment, will have assessment teams for their own facilities that are familiar with the regulations specific to their operations. These departments will report their information to the EOC for review and summation for documentation.

III. LEGAL AUTHORITIES AND REFERENCES

- A. Legal Authorities
 - 1. Local
 - a. Administrative Regulation (AR) 1-04 – Disaster Procedures
 - b. Administrative Regulation (AR) 1-24 – Disaster Documentation
 - 2. State
 - a. Missouri Revised Statutes 44.023 – Disaster Volunteer Program Established
 - b. Missouri Revised Statutes 327 – Architects, Professional Engineers, Land Surveyors, and Landscape Architects
 - 3. Federal
 - a. Title 44 of the Code of Federal Regulations
 - b. Public Law 93-288 (Stafford Act) as amended

- c. Federal Disaster Preparedness and Response Act of 1993
- d. Post Katrina Emergency Management Reform Act (PKEMRA)

B. References

- 1. FEMA IS208 State Disaster Management Manual 2010
- 2. SEMA State of Missouri Administration & Operations Plan for the S.A.V.E. Coalition (Structural Assessment & Visual Evaluation) 2009.

IV. ORGANIZATION AND RESPONSIBILITIES

A. Departmental Responsibilities

1. 3-1-1 Call Center

In conjunction with OEM, collects and reports data provided by citizens and businesses that call to report private sector damage or losses.

2. All City Departments

Each affected City department is required to fully document in a timely and complete manner all disaster recovery costs including repairs or replacements due to damage (AR 1-24). Each department may also be tasked with supporting the Formal Damage Assessment by providing staff, equipment, or data to other departments conducting damage assessment operations.

3. Aviation Department

The Aviation Dept. utilizes its own trained teams to assess any damage to airport facilities and equipment then reports damage to the EOC.

4. City Communications (City Manager's Office)

City Communications assists with scheduling press releases and press briefings concerning damage reports.

5. Emergency Management Director/Unified Management Team (EMD/UMT)

The EMD, in conjunction with the UMT, initiates the damage assessment process, and under the direction of the City Manager submits damage assessment reports to state and federal agencies on behalf of the City. In addition, per AR-24, the EMD will assume the role of Disaster Recovery Manager (DRM).

6. EMS Medical Director (City Manager's Office)

The EMS Medical Director (or designee) assists KCFD and the Health Department in collecting, analyzing, and reporting damage assessment data related to EMS services and health facilities; and reports damage to the EOC.

7. Finance Department

The Finance Dept. will assist the EMD (or designee), GSD, and N&HSD with estimating cost data associated with losses in private and public sector.

8. Fire Department

In conjunction with the KCPD conducts an initial “windshield” safety survey to determine whether it is safe for city personnel and the general public to enter the damage area. Also collects and reports damage to its own facilities and equipment.

9. General Services Department

GSD Facilities collects and reports damage to City buildings and facilities, and organizes and coordinates Public Assistance (i.e. public sector) field damage assessment teams, collects and analyzes damage assessment data, and submits damage assessment data to the EMD. In situations where the City is either a lessee or a leaser, GSD Facilities inspectors will work with the private entity to conduct the damage assessment of the property.

10. Health Department

Collects and reports data concerning damage to medical facilities and reports damage to its own facilities and equipment. Working with area hospitals, the Health Department can provide an estimate to the numbers of ill, injured or deceased for reporting to state and federal agencies. Health Department personnel assist in the identification and assessment of food vendors and eating establishments for safety concerns after a disaster.

11. Information Technology Department

Assists with the creation of damage assessment maps (GIS); and reports damage to departmental facilities and equipment to the EOC.

12. Neighborhood and Housing Services Department (N&HSD)

Neighborhood and Housing Services collects and reports damage to its own facilities and equipment for the initial assessment; performs Rapid Needs Assessment and Preliminary Damage Assessments on Land Bank and Homestead Authority owned properties; and assists with Individual Assistance (i.e. private sector, via Housing Division or Neighborhood Assistance), and submits damage assessment data to the EMD.

13. Office of Environmental Quality (OEQ - City Manager's Office)

The OEQ assists by providing environmental impact data and other information that contributes to a full assessment of community damage.

14. Parks and Recreation Department

Parks and Recreation assesses and reports damage to public infrastructure within its primary service area, and reports damage to its own departmental facilities and equipment to the EOC. The Parks and Recreation Department maintains its own staff of personnel qualified to perform damage assessment and can assist GSD. In addition, Parks and Recreation Dept. will survey woody debris and report the information to the EMD/UMT or designee.

15. Police Department

In conjunction with the KCFD, conducts an initial “windshield” safety survey to determine whether it is safe for City personnel and the general public to enter the damage area. Also collects and reports damage to its own departmental facilities and equipment to the EOC.

16. Public Works Department

The PWD provides reports of damage to public infrastructure (roads, bridges, lights, signage, etc.) within its primary service area, and to its own departmental facilities and equipment to the EOC. PWD also provides data on “white goods” debris and refuse to the EMD/UMT or designee. “White goods” includes those items that cannot go directly to landfills because they contain components hazardous to public health or the environment (ex. computers, air conditioners, washers, dryers, TV’s, etc.).

17. Water Services Department (WSD)

The WSD assesses damage to public infrastructure within its primary service area and damage to its own departmental facilities and equipment via internal teams and reporting procedures. Reports of damage are made to the EOC.

B. Other Agencies

1. American Red Cross

The American Red Cross has trained volunteers that are able to perform damage assessment according to their policies as outlined in **Disaster Assessment Fundamentals: Disaster Services Participant Guide**.

V. CONCEPT OF OPERATIONS

A. General

In most circumstances a formal damage assessment is required to organize and prioritize recovery efforts and to successfully apply for state and federal disaster assistance¹. Damage assessment occurs in multiple stages as follows:

1. The Initial Safety Assessment or “Windshield Survey” – to obtain initial situational awareness
2. The Rapid Needs Assessment – to determine an initial impact and whether a request for State and/or Federal assistance is warranted
3. The Preliminary Damage Assessment – a specific process for gathering data in support of a Presidential Disaster Declaration

B. Initial Safety Assessment (“Windshield”)

1. The Initial Safety Assessment, a.k.a. the “Windshield” assessment, may be requested by the EMD or designee then conducted by the KCFD and KCPD as soon as practical following the disaster. The KCFD and KCPD EOC representative will contact their respective dispatches to inform available field personnel to perform a quick “windshield” survey of the disaster area. The survey will seek to identify:

a. Life/Safety Conditions:

- Need for immediate rescue operations
- Exposure to downed power lines
- General condition of roads and bridges

¹ In some rare circumstances, the catastrophic nature of the disaster may make the formal damage assessment unnecessary in terms of receiving federal disaster assistance. The catastrophic impact of Hurricane Katrina in 2005 is an example of a catastrophic disaster that was declared by the President without a formal damage assessment. Hurricane Sandy in 2013 had a presidential declaration in advance of the actual storm damage.

- Exposure to falling debris
 - Exposure to hazardous materials and chemicals
 - Other conditions which pose an immediate threat to life and safety
- b. General Damage Patterns:
- The general location of areas showing major damage (i.e. damaged, destroyed utilities, buildings, roads, bridges, homes, etc.)
 - The general nature/pattern of damages
2. Field reports will be routed to KCFD and KCPD commanders in the EOC via dispatch², and assembled into a general narrative summarizing external conditions.
3. Each City department will conduct their own initial damage survey to determine whether their own facility remains safe to occupy or if evacuation is needed. Any information will be forward to the appropriate person per their internal operating procedures. This person will be responsible for notifying the EOC/EMD (or designee) if the facility needs to be evacuated.
4. Based on the results of these reports, the KCPD, KCFD and EMD (or UMT if activated and/or a designee) will determine:
- a. Whether there is a need for a Rapid Needs Assessment.
 - b. Whether it is reasonably safe for City employees to enter the damaged area to conduct further damage assessment activities.
 - c. Whether it is reasonably safe for the general public to enter the damaged area, or whether access to the area will need to be restricted (see also **Annex F – Fire, Rescue, EMS, and Hazmat** and **Annex E – Law Enforcement** for more details).
 - d. The EMD or designee (or the UMT if activated) may make a recommendation to the Mayor to declare a state of emergency

C. Rapid Needs Assessment (RNA)

1. General

The purpose of the RNA is to determine the scope of the disaster, assess what resources are necessary to conduct life-sustaining operations during the emergency response phase of a disaster, and provide officials with quick and accurate information to enable State and Federal officials in determining whether assistance may be warranted³.

GSD will coordinate assessment of public facilities, and N&HSD will coordinate assessment of private sector damage.

The American Red Cross may also conduct damage assessment surveys to help determine the extent of damage to private property. These surveys can be used to help ascertain if the per capita impacts (i.e. total cost divided by the population) have been met for public assistance.

² KCFD may also utilize a Field Deputy to relay damage information to the EOC representative.

³ Definition from FEMA's IS208 State Disaster Course manual.

2. Initiation

As needed, the RNA procedure will be initiated by the EMD (or designee) or UMT when activated after the Initial Safety Assessment indicates that it is safe proceed. Generally, the RNA will be initiated within 12 to 72 hours of the onset of a disaster.

3. Information for the RNA

The RNA provides the first description of the type and extent of damages and associated impacts sustained by a community.

4. The RNA team

The RNA team will primarily consist of City employees and its partners. A request for additional trained state resources can be requested from SEMA (ex. the Structural Assessment Visual Evaluation (SAVE) Coalition) if the situation warrants assistance. In larger disasters the State can request Federal RNA teams.

a. The General Services Department (GSD) will coordinate the collection of public sector damage estimates.

- All departments will initiate an inspection of damaged City buildings; facilities and equipment to record and report preliminary damage assessment data⁴.
- The Infrastructure Team will estimate the quantity of debris on City property and right-of-way based on FEMA's Debris Estimating Field Guide 2010 (FEMA 329).
- The GSD Facilities Division will coordinate the structural assessment of buildings in conjunction with other City departments and contracted engineers. Structural damage assessment not already included in the reports of other City departments will be provided by GSD to the EOC.
- GSD Facilities will conduct damage inspections in conjunction with private entities that are either leasers to the City or lessees of City property.

b. The Neighborhood & Housing Services Department (N&HSD) will coordinate the collection of private sector damage estimates.

- The Neighborhood & Community Services Department will estimate the number of damaged and destroyed single and multi-family residences.
- N&HSD also has the role of assessing damage to any Land Bank and Homestead Authority properties⁵

c. Aviation and Water Services Departments maintain their own damage assessment teams and will conduct their own damage assessments. Reports are made to the appropriate person designated within their

⁴ GSD Facilities utilizes an electronic based data system with information about City of Kansas City, MO facilities preloaded. The electronic forms within the system can be modified for use with private structures as well, and the information is entered via data pads that can be deployed in the field.

⁵ Land Bank and Homestead Authority properties are not eligible for repair reimbursement beyond what is necessary to remove debris and correct any potential public health/safety damage (ex. broken gas lines, rupture sewer line, etc.).

internal operating procedures. This person is then responsible for forwarding the information to the City Manager, EOC, or EMD (or designee).

- c. The Office of Emergency Management, working with the American Red Cross, will estimate the number of persons evacuated and sheltered. (see also **Annex J – Evacuation and Transportation Plan** and **Annex L – Mass Care and Sheltering Plan**)
 - d. The Health Department will estimate the number of fatalities, injured and hospitalized.
 - e. GSD and N&CSD will collect, review and summarize data; and will then provide the summary data to the EMD as soon as practicable.
5. Analysis and Decision Making
- a. The EMD, in conjunction with the UMT, will analyze the damage reports from the various sources to determine whether the damages warrant a recommendation to the Mayor to declare a state of emergency (if this has not already been done).
 - b. After receiving the analysis, the City Manager will consult with the Mayor and determine if the City will make a formal request to the State for assistance.
 - c. The EMD will provide the summary data to the Missouri State Emergency Management Agency (SEMA)⁶.
 - d. SEMA will determine whether a Preliminary Damage Assessment should be requested.

D. Preliminary Damage Assessment

1. General

The PDA is a specific process used to gather supporting information for the Governor's request for a Presidential Declaration. The (PDA) process is jointly conducted with local, state, and federal representatives, and the results are used by the Federal Emergency Management Agency (FEMA) to determine whether federal disaster assistance will be granted.

2. Initiation

The PDA is conducted after the State determines that the response to the disaster exceeds the local and State resources and ability to respond. Generally, the PDA is initiated 3 to 10 days after a disaster.

3. Information to Gather

A state and/or federal declaration is based upon meeting certain monetary and damage thresholds⁷. The specific threshold amount can change with the new federal fiscal year, and is based on a statewide and countywide population multiplied by a respective per capita impact indicator. (i.e. a State

⁶ KCMO data may also be used to support federal disaster assistance requests by Jackson, Platte, Cass and Clay Counties. Therefore KCMO data should be provided to the state if requested irrespective of our own decision to request (or not request) federal disaster assistance. At the very least a Situation Report should be sent each operational period or as requested.

⁷ A State declaration made if county per capita impact (dollar amount) is reached; Federal impact is based on a statewide per capita impact.

Declaration is made if the amount of monetary damages meet or exceed the per capita impact indicator multiplied by the population of the county; a Federal Declaration is calculated in the same manner but using the population of the entire State.)

4. PDA Team

Field PDA teams typically include at least one representative from the City matched with their state and federal counterparts. The General Services Department (GSD) will coordinate inspections of public sector damages via PDA Teams. N&HSD will coordinate inspections of private sector damage; Aviation Dept. and WSD will coordinate inspections of their respective facilities.

Upon notification from the EMD/UMT of the need for a PDA, the GSD will:

- a. review rapid assessment data, information from the 3-1-1 Action Center, American Red Cross data, damage patterns, and other data to determine where affected people, homes and businesses are located
- b. make contact with state and federal damage assessment personnel to establish an inspection schedule
- c. contact City departments to organize damage assessment teams

GSD, N&HSD, Aviation Department, and WSD will organize just in time training for their respective field damage assessment personnel. At a minimum these briefings will cover:

- a. safety procedures (provided by City Safety Officer & WSD and Aviation Safety Officers)
- b. federal eligibility guidelines (provided by the Office of Emergency Management)
- c. media protocols (provided by the City Communications Officer)

Prior to deployment, GSD and N&HSD will provide or request equipment for their respective field teams to include (but not limited to):

- a. safety equipment (as necessary)
- b. vehicular transportation
- c. communications equipment (telephone or radio)
- d. copies of the KCMO Rapid Damage Assessment Forms for the area to be surveyed
- e. maps indicating the area to be surveyed, and to the extent available, locations of damage
- f. a copy of the damage assessment form showing the information that needs to be recorded (see Attachment D-1 State Damage Assessment Forms)

ATTACHMENT D-1
STATE DAMAGE ASSESSMENT FORMS

The State of Missouri's Emergency Management Agency has forms which can be utilized by damage assessment teams for identifying and recording structures that have been inspected. These forms are presented here as informative examples to illustrate the type of data necessary for accurate record keeping.

A. Facility/Building Damage Category Placards

INSPECTED	
Lawful Occupancy Permitted	
<p>This structure has been inspected (as indicated below) and no apparent structural hazard has been found.</p> <p><input type="checkbox"/> Inspected Exterior Only</p> <p><input type="checkbox"/> Inspected Exterior and Interior</p> <p>Report any unsafe condition to local authorities. Reinspection may be required.</p> <p>Inspector Comments:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Facility Name and Address:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Date _____</p> <p>Time _____</p> <p>Caution: Aftershocks since inspection may increase damage and risk.</p> <p>This facility was inspected under emergency conditions for:</p> <p>_____</p> <p>_____</p> <p>(Jurisdiction)</p> <p>Inspector ID / Agency</p> <p>_____</p> <p>_____</p> <p>_____</p>

RESTRICTED USE

Caution: This structure has been inspected and found to be damaged as described below.

Entry, occupancy, and lawful use are restricted as indicated below:

Do not enter the following areas: _____

Brief entry allowed for access to contents: _____

Other restrictions: _____

Facility Name and Address: _____

Date _____

Time _____

Caution: Aftershocks since inspection may increase damage and risk.

This facility was inspected under emergency conditions for: _____

(Jurisdiction)

Inspector ID / Agency _____

**Do Not Remove, Alter, or Cover
This Placard Until Authorized by
Governing Authority**

UNSAFE

DO NOT ENTER OR OCCUPY

Warning:

This structure has been seriously damaged and is unsafe. Do not enter. Entry may result in death or injury.

Comments: _____

Facility Name and Address: _____

Date _____

Time _____

This facility was inspected under emergency conditions for: _____

(Jurisdiction)
on the date and time noted.

Inspector ID/Agency: _____

**Do Not Remove This Placard until
Authorized by Governing Authority.**

B. SEMA S.A.V.E. Safety Assessment Forms

ATC-20 Rapid Evaluation Safety Assessment Form			
Inspection		Report # _____	
Inspector ID: _____		Inspection date and time: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	
Affiliation: _____		Areas inspected: <input type="checkbox"/> Exterior only <input type="checkbox"/> Exterior and interior	
Building Description		Type of Construction	
Building name: _____		<input type="checkbox"/> Wood frame <input type="checkbox"/> Concrete shear wall	
Address: _____		<input type="checkbox"/> Steel frame <input type="checkbox"/> Unreinforced masonry	
_____		<input type="checkbox"/> Tilt-up concrete <input type="checkbox"/> Reinforced masonry	
_____		<input type="checkbox"/> Concrete frame <input type="checkbox"/> Other: _____	
Building contact/phone: _____		Primary Occupancy	
Number of stories above ground: _____ below ground: _____		<input type="checkbox"/> Dwelling <input type="checkbox"/> Commercial <input type="checkbox"/> Government	
Approx. "Footprint area" (square feet): _____		<input type="checkbox"/> Other residential <input type="checkbox"/> Offices <input type="checkbox"/> Historic	
Number of residential units: _____		<input type="checkbox"/> Public assembly <input type="checkbox"/> Industrial <input type="checkbox"/> School	
Number of residential units not habitable: _____		<input type="checkbox"/> Emergency services <input type="checkbox"/> Other: _____	
Evaluation			
Investigate the building for the conditions below and check the appropriate column.			
Observed Conditions:	Minor/None	Moderate	Severe
Collapse, partial collapse, or building off foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building or story leaning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Racking damage to walls, other structural damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chimney, parapet, or other falling hazard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ground slope movement or cracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____			
Posting			
Choose a posting based on the evaluation and team judgment. Severe conditions endangering the overall building are grounds for an Unsafe posting. Localized Severe and overall Moderate conditions may allow a Restricted Use posting. Post INSPECTED placard at main entrance. Post RESTRICTED USE and UNSAFE placards at all entrances.			
<input type="checkbox"/> INSPECTED (Green placard) <input type="checkbox"/> RESTRICTED USE (Yellow placard) <input type="checkbox"/> UNSAFE (Red placard)			
Record any use and entry restrictions exactly as written on placard: _____			

Further Actions Check the boxes below only if further actions are needed.			
<input type="checkbox"/> Barricades needed in the following areas: _____			

<input type="checkbox"/> Detailed Evaluation recommended: <input type="checkbox"/> Structural <input type="checkbox"/> Geotechnical <input type="checkbox"/> Other: _____			
<input type="checkbox"/> Other recommendations: _____			
Comments: _____			

ATC-20 Detailed Evaluation Safety Assessment Form**Inspection**

Inspector ID: _____

Affiliation: _____

Inspection date and time: _____ ☐ AM ☐ PM

Report # _____

Final Posting
from page 2

- ☐ Inspected
☐ Restricted Use
☐ Unsafe

Building Description

Building name: _____

Address: _____

Building contact/phone: _____

Number of stories above ground: _____ below ground: _____

Approx. "Footprint area" (square feet): _____

Number of residential units: _____

Number of residential units not habitable: _____

Type of Construction

- ☐ Wood frame ☐ Concrete shear wall
☐ Steel frame ☐ Unreinforced masonry
☐ Tilt-up concrete ☐ Reinforced masonry
☐ Concrete frame ☐ Other: _____

Primary Occupancy

- ☐ Dwelling ☐ Commercial ☐ Government
☐ Other residential ☐ Offices ☐ Historic
☐ Public assembly ☐ Industrial ☐ School
☐ Emergency services ☐ Other: _____

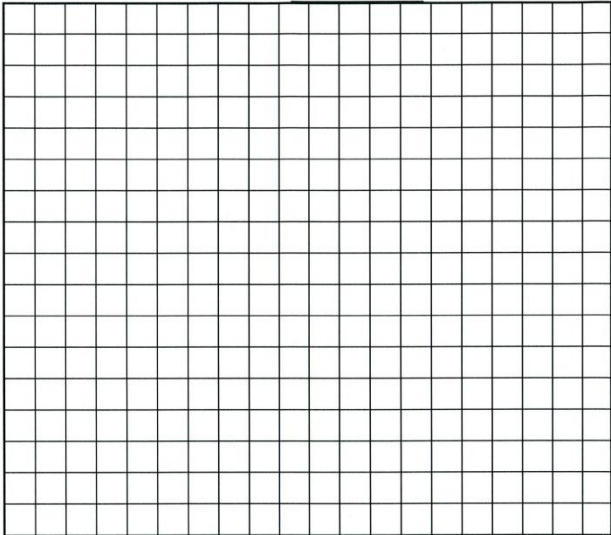
Evaluation

Investigate the building for the conditions below and check the appropriate column. There is room on the second page for a sketch.

	Minor/None	Moderate	Severe	Comments
Overall hazards:				
Collapse or partial collapse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Building or story leaning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Structural hazards:				
Foundations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Roofs, floors (vertical loads)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Columns, pilasters, corbels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Diaphragms, horizontal bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Walls, vertical bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Precast connections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Nonstructural hazards:				
Parapets, ornamentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cladding, glazing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ceilings, light fixtures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Interior walls, partitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Elevators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Stairs, exits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Electric, gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Geotechnical hazards:				
Slope failure, debris	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ground movement, fissures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

General Comments: _____

Continue on page 2

ATC-20 Detailed Evaluation Safety Assessment Form		Page 2
Building name: _____	Inspector ID: _____ Report # _____	
Sketch (optional) Provide a sketch of the building or damaged portions. Indicate damage points.		
Posting If there is an existing posting from a previous evaluation, check the appropriate box. Previous posting: <input type="checkbox"/> INSPECTED <input type="checkbox"/> RESTRICTED USE <input type="checkbox"/> UNSAFE Inspector ID: _____ Date: _____ If necessary, revise the posting based on the new evaluation and team judgment. <i>Severe</i> conditions endangering the overall building are grounds for an Unsafe posting. Local <i>Severe</i> and overall <i>Moderate</i> conditions may allow a Restricted Use posting. Indicate the current posting below and at the top of page one. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> INSPECTED (Green placard) <input type="checkbox"/> RESTRICTED USE (Yellow placard) <input type="checkbox"/> UNSAFE (Red placard) </div> Record any use and entry restrictions exactly as written on placard: _____ _____ _____		
Further Actions Check the boxes below only if further actions are needed. <div style="margin-top: 10px;"> <input type="checkbox"/> Barricades needed in the following areas: _____ _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> Engineering Evaluation recommended: <input type="checkbox"/> Structural <input type="checkbox"/> Geotechnical <input type="checkbox"/> Other: _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> Other recommendations: _____ _____ _____ </div> <div style="margin-top: 10px;"> Comments: _____ _____ _____ </div>		

ATC-20 Fixed Equipment Checklist

FACILITY:		INSPECTOR:	
Name: _____ Address: _____ _____ _____	Inspector ID: _____ Affiliation: _____ Report #: _____ INSPECTION DATE: Mo/day/year _____ Time _____ a.m. ____ p.m. ____		
CHECKLIST:		Equipment Damaged	
General Items:	<i>No</i>	<i>Yes</i> <i>Operable</i>	<i>Yes</i> <i>Inoperable</i>
Comments			
Main Boilers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chillers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Generators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fuel Tanks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battery Racks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On-site Water Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communications Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Main Transformers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Main Electrical Panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elevators (Traction)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Fixed Equipment:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special Concerns for Hospitals and Other Health Care Facilities:			
Radiation Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toxic Chemical Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BIOHAZARD Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liquid Oxygen Tanks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recommendations/Comments:			

ATC-45 Rapid Evaluation Safety Assessment Form**Inspection**

Inspector ID: _____ Inspection date: _____
 Affiliation: _____ Inspection time: _____ ☐ AM ☐ PM
 Areas inspected: ☐ Exterior only ☐ Exterior and interior

Building Description

Building name: _____ Type of Building
 Address: _____ ☐ Mid-rise or high-rise ☐ Pre-fabricated
 _____ ☐ Low-rise multi-family ☐ One- or two-family dwelling
 _____ ☐ Low-rise commercial
 Building contact/phone: _____ Primary Occupancy
 Number of stories: _____ ☐ Dwelling ☐ Commercial ☐ Government
 "Footprint area" (square feet): _____ ☐ Other residential ☐ Offices ☐ Historic
 Number of residential units: _____ ☐ Public assembly ☐ Industrial ☐ School
 _____ ☐ Emergency services ☐ Other: _____

Evaluation

Investigate the building for the conditions below and check the appropriate column. **Estimated Building Damage**
 (excluding contents)

Observed Conditions:	Minor/None	Moderate	Severe	
Collapse, partial collapse, or building off foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> None
Building significantly out of plumb or in danger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> >0 to <1%
Damage to primary structural members, racking of walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 to <10%
Falling hazard due to nonstructural damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 10 to <30%
Geotechnical hazard, scour, erosion, slope failure, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 30 to <70%
Electrical lines / fixtures submerged / leaning trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 70 to <100%
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 100%

☐ See back of form for further comments.

Posting

Choose a posting based on the evaluation and team judgment. Severe conditions endangering the overall building are grounds for an Unsafe posting. Localized Severe and overall Moderate conditions may allow a Restricted Use posting.

☐ **INSPECTED** (Green placard) ☐ **RESTRICTED USE** (Yellow placard) ☐ **UNSAFE** (Red placard)

Record any use and entry restrictions exactly as written on placard: _____

Number of residential units vacated: _____

Further Actions Check the boxes below only if further actions are needed.

☐ Barricades needed in the following areas: _____

☐ Detailed Evaluation recommended: ☐ Structural ☐ Geotechnical ☐ Other: _____
☐ Substantial Damage determination recommended
☐ Other recommendations: _____

☐ See back of form for further comments.

© Copyright 2004-07, Applied Technology Council

Permission is granted for unlimited, non-exclusive, non-commercial use and distribution of ATC evaluation forms, provided that this Copyright Notice appears on all copies and the Applied Technology Council name shall not be used in any advertising or publicity of Licensee product. Permission is further subject to the following conditions: (1) Licensee does not reprint, repackaging or offer this form for sale or license; and (2) no material gain or financial profit is to be made from any sale or license of this form. Placards may be used without restrictions for their intended use as building postings. All rights not specifically granted to Licensee are herein reserved by ATC.

Missouri SAVE Coalition Summary of Inspections Log

Inspector Name: _____ Inspector ID # _____

Jurisdiction: _____ **SAVE Region:** _____

[illegible]

Primary Occupancy Type

SFR.....Single Family Residence
MFR.....Multiple Family Residence

Y
HI.....Historic
GOV...Government
ES.....Emergency Services

COM....Commercial
IND.....Industrial

OFF.....Office
SCH....School
P.A.Public Assembly

CURRENT STATUS

UNSAFE.....R
LIMITED ENTRY.....

INSPECTED.....G

Date this Summary Report Submitted to Local Jurisdiction Officials:

February 2009

C. SEMA Joint Preliminary Damage Assessment Forms (Public & Individual)

JOINT PRELIMINARY DAMAGE ASSESSMENT



SEMA fax number – (573) 634-7966

1. Jurisdiction(s)

Affected: _____ **Date:** _____

2. Disaster: Type _____ Date _____
Time _____

3. Report by: Name _____
Title _____

Work Phone _____ Home Phone _____

Public Facilities

Type of Work or Facility Categories	Estimate	# of Sites	Brief Description of Damages
A. Debris Removal	\$		
B. Protective Measures	\$		
C. Roads & Bridges	\$		
D. Water Control	\$		
E. Buildings Equipment	\$		
F. Utilities	\$		
G. Parks and Recreations	\$		
Total Estimate	\$		



JOINT PRELIMINARY DAMAGE ASSESSMENT

SEMA fax number – (573) 634-7966

1. **Jurisdiction(s)**
Affected: _____ Date: _____

2. **Disaster:** Type _____ Date _____
Time _____

3. **Report by:** Name _____
Title _____

Work Phone _____ Home Phone _____

4. **Affected Individuals: (Assign affected individuals to only one category.)**

a. Fatalities		d. Missing	
b. Injuries		e. Evacuated	
c. Hospitalized		f. Sheltered	

5. **Property Damage:**

a. **Residence**

	# Destroyed	# Major	# Minor	# Affected	# Inaccessible	# Insured
Single Family						
Multi Family						
Mobile Homes						

Estimated Losses to Residence \$ _____

b. **Business**

# Destroyed	# Major	# Minor	# Insured

c. **Estimated Loss to Business \$ _____**

ATTACHMENT D-2

FEDERAL ELIGIBILITY CONSIDERATIONS

A. General Eligibility Requirements (Apply to every disaster, every loss)

1. The work must be required as a direct result of the disaster.
 - This excludes damage caused by negligence or a lack of maintenance.
2. The work must be within the federally declared disaster area.
 - Federal disasters are declared by county. Be sure that the KCMO building, facility, equipment or site is located in a declared county.
3. The work must be the legal responsibility of the City.
 - This excludes buildings and facilities leased to another party, unless the lease requires the City to perform all repairs under both disaster and non-disaster circumstances.
 - It excludes work that is covered by insurance.
 - Also, FEMA cannot fund work that is under the direct authority of another federal agency (e.g. highways eligible for repairs under the Federal Highways Administration (FHWA) Emergency Relief program).

B. Emergency Work

1. Category A – Debris Removal

Debris Removal includes clearance, removal, and/or disposal of items such as trees, woody debris, sand, mud, silt, gravel, building components, wreckage, vehicles, and personal property on the city's right-of-way.

In order to be eligible for reimbursement, the work must be necessary to:

- eliminate an immediate threat to lives, public health and safety;
- eliminate threats of significant damage to improved public or private property;
- ensure the economic recovery of the affected community to the benefit of the community-at-large or;
- mitigate the risk to life and property by removing substantially damaged structures and associated fixed in place structures, improvements, or systems as needed to convert property acquired through a FEMA hazard mitigation program to uses compatible with open space, recreation, or wetlands management practices.

Debris removal from private property is generally not eligible because it is the responsibility of the individual property owner. If property owners move the disaster-related debris to a public right-of-way, the local government may be reimbursed for curbside pickup and disposal for a limited period of time. If the

debris on private business and residential property is so widespread that public health, safety, or the economic recovery of the community is threatened, FEMA may fund debris removal from private property, but it must be approved in advance by FEMA. Another ineligible item is the removal of tree limbs and trunks from undeveloped wilderness areas.

2. Category B – Emergency Protective Measures

Emergency Protective Measures are the actions taken before, during, and after a disaster to save lives, protect public health and safety, and prevent damage to improved public and private property. Emergency communications, emergency access and emergency public transportation costs may also be eligible.

Examples of eligible emergency protective measures include warning devices (barricades, signs, and announcements), search and rescue, security forces (police and guards), construction of temporary levees, provision of shelters or emergency care, sandbagging, bracing/shoring damaged structures, provision of food, water, ice and other essential needs, emergency repairs, emergency demolition, and removal of health and safety hazards.

C. Permanent Work

1. Category C – Roads and Bridges

Roads (paved, gravel, and dirt) are eligible for permanent repair or replacement under the Public Assistance Program, unless they are Federal-aid roads. Eligible work includes repair to surfaces, bases, shoulders, ditches, culverts, low water crossings, and other features, such as guardrails. Damage to the road must be disaster-related to be eligible for repair. In addition, repairs necessary as the result of normal deterioration, such as "alligator cracking," are not eligible because it is pre-disaster damage.

Bridges are also eligible for repair or replacement under the Public Assistance Program, unless they are on a Federal-aid road. Eligible work includes repairs to decking, guardrails, girders, pavement, abutments, piers, slope protection, and approaches. Only repairs of disaster-related damage are eligible. In some cases, FEMA may use pre-disaster bridge inspection reports to determine if damage to a bridge was present before the disaster.

Works is not eligible for Public Assistance funding if the road or bridge falls under the jurisdiction of the Federal Highway Administration (FHWA), or if it services USACE or NRCS levees and dams; or if the road or bridge is privately owned (including home owners associations).

2. Category D – Water Control Facilities

Water control facilities include dams and reservoirs, levees, lined and unlined engineered drainage channels, shore protective devices, irrigation facilities, and pumping facilities.

Restoration of these facilities may be eligible, but maintenance records, surveys, and documentation of pre-disaster capacity and pre-disaster levels of debris will be of particular importance to determine disaster related damage and debris. In addition, these facilities must have a regular clearance schedule to be considered an actively used and maintained facility. However, removal of debris that poses an immediate threat of clogging or damaging intake or adjacent structures may be eligible.

The USACE and NRCS have primary authority for repair of flood control works, whether constructed with Federal or non-Federal funds, as well as authority over federally funded shore protective devices. Permanent repairs to these facilities are not eligible through the PA Program.

3. Category E – Buildings and Equipment

Building repair or replacement including furnishings, interior systems such as electrical work, replacement of pre-disaster quantities of consumable supplies and inventory, replacement of library books and publications, and the removal of mud, silt, or other accumulated debris, along with any cleaning and painting necessary to restore the building is eligible under the Public Assistance Program

If there is an insurance policy for a facility, FEMA will deduct the amount of insurance proceeds (actual or anticipated) from the eligible costs before providing funds. If a building or equipment is located in an identified floodplain but is not insured, then FEMA will reduce the public assistance grant by the maximum amount that would have been received under the Federal flood insurance program. The reduction in eligible costs will be the larger of the two reductions just described.

FEMA may pay for upgrades that are required by certain codes and standards. Examples include roof bracing installed following a hurricane, seismic upgrades to mitigate damage from earthquakes, and upgrades to meet standards regarding use by the disabled. The repairs and upgrades are limited to the damaged elements. If a structure must be replaced, the new facility must comply with all applicable codes and standards regardless of the level of FEMA funding.

4. Category F – Utilities

Typical Utilities include: water treatment plants and delivery systems; power generation and distribution facilities including generators, substations, and power lines; sewage collection systems and treatment plants; and telecommunications.

The owner of a facility is responsible for determining the extent of damage incurred. FEMA does not provide funds for random surveys to look for damage, such as inspection of sewer lines. However, if disaster-related damage is evident, FEMA may pay for inspections to determine the extent of the damage and method of repair.

While FEMA will pay for restoration of damaged utilities, FEMA does not provide funds for increased operating expenses resulting from a disaster. Similarly,

FEMA cannot provide funds for revenue lost if a utility is shut down. However, the cost of establishing temporary, emergency services in the event of a utility shut-down may be eligible.

5. Category G – Parks, Recreational Facilities and Other Items

This includes repair and restoration of parks, playgrounds, pools, cemeteries, beaches, and any other work or facility that cannot be characterized adequately by Categories A-F

Eligible publicly-owned facilities include: playground equipment, swimming pools, bath houses, tennis courts, boat docks, piers, picnic tables, golf courses, and other types of facilities, such as roads, buildings and utilities, that are located in parks and recreational areas subject to the eligibility criteria for Categories C, D, E, and F.

FEMA will reimburse for the removal of tree debris and the removal of trees as emergency protective measures if the removal eliminates an immediate threat to lives, public health and safety, and improved property, or if removal is necessary to ensure the economic recovery of the affected community to the benefit of the community-at-large. However, FEMA will not reimburse for the replacement of trees, shrubs, or other ground cover. Grass and sod are eligible only when necessary to stabilize slopes and minimize sediment runoff.